

---

## FISH UPTAKE AND LEVELS OF Cr, Cu, Cd, Ni, Pb AND Zn IN BEIRE LAKE WATER

<sup>1</sup>LPRJ Wijesinghe, <sup>1</sup>DDN Pathmasiri and <sup>2</sup>KRR Mahanama

<sup>1</sup>National Water Supply and Drainage Board, Ratmalana

<sup>2</sup>Department of Chemistry, University of Colombo, Colombo 03

Fish is considered as a source of protein, carbohydrates, fats, vitamins and minerals to human. Much of the fish available in the Sri Lankan market is harvested from sea. Considerable amount of fresh water fish farming is done in stagnant inland water bodies. Unlike in moving water bodies, fish and the plants grown in these stagnant water bodies are exposed to pollutants, which are accumulated over a period. In general, stagnant water bodies in dry zone are contaminated with agrochemicals due to poor agricultural practices and the wet zone stagnant water bodies are polluted due to urbanization and industrialization.

Beire Lake, in Colombo, is the recipient of both the domestic and industrial waste. These inputs have added a considerable burden to the water quality and it is regarded as the most polluted inland water body in Sri Lanka. The extent of pollution in the Beire Lake is indicated from the eutrophication, dark colored surface water and sediments along with the smell of rotten eggs. Yet, the Beire Lake is used for many human activities such as bathing, washing, recreation and fish harvesting.

This study was undertaken to investigate the levels of Cr, Cu, Cd, Ni, Pb and Zn in the Beire Lake water and the levels of fish intake. The sampling and the analysis of these metals were carried out during the period of 2000-2001. The atomic absorption spectrophotometric analysis revealed significantly high levels of these metals in lake water than standards prescribed for portable water. The levels of these metals present in fish were found to be in ppm range, which can impose considerable health risk for the consumers.